

Amiga Release 2

Getting Started



 **Commodore**[®]
AMIGA[®]

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1. Introduction

Welcome to 2.0!

Congratulations on upgrading your Amiga to the latest system software release.

Version 2.0 of the Amiga operating system retains all the advantages that made the Amiga a groundbreaking personal computer, yet is such a thorough reworking that it is almost like getting a new computer.

This manual is intended as a guide for those who have Version 1.3 or earlier Amigas and are upgrading to the latest release of 2.0. It will help make the transition between your current system and a 2.0-based system as quick and simple as possible.

Parts 1 and 2 give a brief overview of the new features of 2.0, and contrast them with their equivalents (if any) in 1.3.

Parts 3 and 4 describe the installation procedure, and make specific recommendations to help resolve any difficulties that may arise from the changeover.

Note that this manual is not a complete specification of the features of either the 1.3 or the 2.0 operating system releases. If for any reason you need information about 1.3, consult the *Enhancer Software* manual distributed with the AmigaDOS 1.3 Enhancer kits, and *The AmigaDOS Manual, 2nd Edition*, published by Bantam Books.

The Version 2.0 software is documented in the *Using the System Software* manual, which is included in your 2.0 ROM Upgrade package.

What you should find in your upgrade kit

In addition to this manual, the following items are packed in the 2.0 ROM Upgrade box:

- 1 2.0 ROM — a small plastic box contains the ROM chip that must be installed inside your Amiga to run the 2.0 operating system. The ROM should be installed by your authorized Commodore dealer or service center.
- 2 ROM Installation Instructions — A two-page document with directions for the technician installing the ROM.
- 3 2.0 disks — Four 3.5 inch floppy disks with 2.0 software: 2.0Install, Workbench2.0, Extras2.0, and AmigaFonts2.0.
- 4 Proof of purchase sticker.
- 5 *Using the System Software* — The large manual documenting Version 2.0 Workbench and AmigaDOS features. This may include an addendum with replacement pages for the manual, covering improvements in the release version of 2.0.
- 6 License Agreement — Read this before proceeding.

A Word About Versions

Throughout this manual and the *Using the System Software* manual, the terms “1.3” and “2.0” refer to the preceding major release of the Amiga operating system software and the current release, respectively.

You should be aware that release number (1.0, 1.1, 1.2, 1.3, 2.0) designations are used for convenience and do not precisely identify the software. Specific release numbers, such as 1.3.2, or 2.0.4, identify updates by Commodore to the Amiga system software.

Note, however, that even the full release/update number is not “the final word.” The Kickstart ROM, the Workbench, and the files on your 2.0 disks all have version numbers embedded in them to identify them. Each file or software module has its own version number.

You can see the Kickstart and Workbench version numbers by using the 2.0 Workbench menu’s “About . . .” item. Version numbers for other 2.0 files are available using the AmigaDOS VERSION command.

See the section on bug reporting at the end of this manual for further information on reporting version numbers.

What is 2.0?

Version 2.0 is the result of intensive effort by Commodore to bring the Amiga operating system to a new level of functionality. 2.0 offers profound improvements in stability and flexibility, while retaining the combination of power and ease of use that are the hallmark of the Amiga.

Virtually all the software that makes up your Amiga’s operating system — the ROM “Kickstart”, the Workbench and Workbench utilities, AmigaDOS commands, libraries and other support files, etc. — have been rewritten to achieve these goals.

New modules and programs have been included, adding further standard capabilities to the Amiga. Certain files present in previous releases are no longer present, having been made unnecessary by improvements in the system.

Advantages

Many of the changes in the Amiga operating system will be obvious when you boot Version 2.0 for the first time. Other enhancements will soon become apparent, while some will remain invisible to many users.

Among the most important advantages in this release:

- **new look**

The graphic design of the Amiga's screens has been completely revised for Version 2.0. Windows and gadgets now have a 3-D appearance. All icons have been redesigned. The Wait pointer and default mouse pointer have new images. The Topaz system font has been redesigned. New features for customizing the look of your Amiga environment have been added.

- **better file system**

The FastFileSystem has been improved in both speed and reliability, and is now in ROM. Compatibility with a greater variety of controllers and storage media has been achieved. A Workbench-driven hard disk backup utility is now included with the system.

- **AREXX**

AREXX, a simple, powerful programming language, has been made a part of the system software. AREXX gives advanced scripting and text-processing capability. It is also designed especially to use Amiga multitasking to allow easy interprocess communication (IPC) between different applications.

- **new display modes**

When coupled with the new Enhanced Chip Set (ECS), several new video capabilities are provided, including SuperHires and Productivity modes. Both NTSC and PAL video modes are supported by the same ECS chips. Preference editors are provided to allow easy access to all display options.

- **complete, modular Prefs**

The Preferences system has been expanded and split into several separate editors. This provides a much greater range of options, while allowing quick access to the desired options. Each Prefs editor allows its settings to be saved and loaded individually, so a variety of configurations can easily be recalled for different work needs.

- **better development environment**

There are many features that will not be noticed directly by users, but which will benefit all by making the Amiga a more attractive platform for software developers. The Version 2.0 software provides tools and resources that make it easier for developers to create flexible, reliable, easy-to-use programs for the Amiga. The inclusion of AREXX will accelerate the development of modular software that can be customized by users and linked into specialized “super-applications”.

- **complete documentation**

All the elements of the 2.0 operating system — Workbench, AmigaDOS, AREXX, and the included utilities — are documented in the new *Using the System Software* manual. Every effort was made to make this book as thorough, accurate, and easy to understand as possible.

What You Need

- **ROM and disks**

To run Version 2.0 of the Amiga operating system, you need the 512 KB 2.0 ROM installed in your Amiga, and the additional 2.0 software on disk. Once the new ROM is installed, you can run 2.0 from floppy, or use the included installation software to let you run 2.0 from your hard disk.

- **ECS chips**

You do *not* need the Enhanced Chip Set (ECS Agnus and ECS Denise) in your Amiga to run 2.0. These chips are only needed if you wish to use the new video modes they make possible. 2.0 will run normally on non-ECS Amigas, except that the new modes will not be available.

Note that some Amigas have already been shipped with the ECS Agnus chip. These only require the addition of ECS Denise and the 2.0 software to enable the new modes. It is possible to install

the ECS Denise with a non-ECS Agnus, but the new graphics capabilities will not be available without also installing ECS Agnus.

For more information on the Enhanced Chip Set, see the **Installation** section below.

- **Documentation**

To get the full value from the Version 2.0 release, you must also have the proper documentation. Be sure you have (and read!) the update of the *Using the System Software* manual included in this Upgrade package with its addendum. Earlier versions of this manual, released with many A3000 model computers, are not entirely accurate for the ROM release of 2.0.

2. Changes

The following section highlights differences between the 2.0 system software and that of Version 1.3. If you are familiar with 1.3, you can use this section as a quick overview of what is new. Consult the *Using the System Software* manual on how to use the new or changed features.

In addition, certain potential problem areas related to updating a 1.3 system to a 2.0 system are discussed in the **Troubleshooting** section. Please read these two sections carefully to help your 1.3 – 2.0 transition process go as smoothly as possible.

System-wide changes

- **new video mode settings**

Productivity mode for flicker-free high-resolution display on multiscan monitors

SuperHires mode for ultra-sharp video titling applications

New genlock modes for more video compositing options

- **new and changed gadgets and pointers**

all system gadgets have new 3-D look-and-feel and new images
one depth gadget on windows and screens replaces “Front” and “Back” gadgets

new “zoom” gadget for quickly changing window sizes

scroll arrow gadgets are now clustered around size gadget

new standardized gadgets: List, Radio Button, Cycle, etc.

new “stopwatch” Wait pointer and new default mouse pointer

- **system fonts**

selectable Workbench icon font

selectable Screen font (window titles and menus)

selectable System font (Shell and similar windows, requesters, defaults)

redesigned Topaz font

Compugraphic® scalable outline font support, with three outline fonts included

- **new input options**

screens can be dragged from any point with a selectable qualifier key

customizable Amiga-key combinations for screen-shuffle and requester accept/cancel

Commodities Exchange program makes new input utilities easy to create, manage, and use

selectable inclusion/exclusion of unmodified control characters from text gadgets (default requires pressing the Left Amiga key to enter control characters)

- **standard requesters**

simple standard file and font requesters are available for use by any application

- **better memory management**

expansion RAM is configured more effectively; FastMemFirst and MergeMem programs are no longer needed

management of low-memory conditions is much improved

- **Preferences**

separated by function into individual editors

each editor can save its settings in user-specified files, with or without icons

- **AREXX**

AREXX language interpreter and utilities included

AmigaDOS Shell can accept AREXX commands

Ed text editor responds to AREXX

Workbench

Dramatic changes in the Amiga's Workbench graphical user interface have been made to offer the same level of control to the Workbench user as to the Shell user. At the same time, the Workbench environment is both more aesthetically appealing under 2.0 and easier to adapt to individual tastes.

Global changes

- ability to define a Workbench screen much larger than the physical screen (via ScreenMode Prefs), and "autoscroll" to hidden areas
- a more logical and complete menu arrangement: Window menu controls window options, Icons menu controls icon options
- a "Show All Files" mode that displays icons for files and directories that don't have .info files
- a new palette scheme for 3-D appearance, better text rendition, and more effective use of color
- no more "fuel gauge"; disk usage statistics are displayed in the disk window titlebar
- icons have been redesigned with consistent size/color format
- editable default icon images for all icon types
- icons may be drag-selected
- independent selectable icon font
- right mouse button can cancel icon and window operations
- numerous new or improved window and icon manipulation features
- a choice of preset preferences for screen palette and window background patterns

Menus

There are now four menus on the Workbench screen: Workbench, Window, Icons, and Tools. All the Workbench menu choices present in 1.3 are in 2.0, however several have either moved to a different menu or have been renamed.

Changed

the 1.3 **Workbench**, **Disk**, and **Special** menus have had their items appropriately redistributed among the 2.0 **Workbench** (global operations), **Window**, and **Icons** menus

Last Error has become **Last Message**

Version has become **About . . .**, and now opens a requester

Discard has become **Delete**

Snapshot also features **Snapshot Window** and **Snapshot All**

Initialize has become **Format Disk . . .**

Info has become **Information . . .**

New

Workbench menu

Backdrop — toggles Workbench between a backdrop and normal window

Execute Command — allows running single AmigaDOS commands from Workbench

Update All — makes all windows reflect current file status

Redraw All — refreshes all window graphics

About . . . — displays version and copyright information

Quit — closes Workbench

Window menu

New Drawer — creates a new drawer in the window

Open Parent — opens the parent of the window

Update — makes window reflect current file status

Select Contents — selects all icons in the window

Show — show only icons, or all files and directories via “pseudo-icons”

View By — view files and directories as icons, or by name, date, or size

Icons menu

UnSnapshot — removes snapshotting of the selected icon(s)

Leave Out/Put Away — store icons on the Workbench window

Tools menu

ResetWB — resets the Workbench

Other New Features

- Many items have Right Amiga keyboard shortcuts, displayed after the item name
- All menu items with submenus display » after the item name
- All menu items that bring up a requester display . . . after the item name

Programs

Changed

Palette has become Colors

KeyToy has become KeyShow

Prefs/Printer has become Printer & PrinterGfx

Clock

MEmacs

Prefs/Pointer

HDTtoolbox

New

Prefs:

Time — set time and date graphically

ScreenMode — choose default screen resolution, size, and depth

Overscan — set default overscan

IControl — set special input options

Font — choose default fonts

WBPattern — set window background patterns

Fountain — manages scalable outline fonts

Display — displays IFF picture files

IconEdit — an enhanced icon editor, replaces IconEd

Exchange/commodities — input utility manager with utilities

AddMonitor/BindMonitor — enable specific video modes

RexxMast — AREXX interpreter

HDBackup — a graphical interface to the BRU hard disk backup program included with 2.0

Gone

Certain previous Workbench programs are not on the 2.0 disks, generally because improvements in the system software have made them unnecessary.

InstallPrinter — no longer necessary
CopyPrefs — no longer necessary
FastMemFirst — no longer necessary
MergeMem — generally no longer necessary
IconEd — replaced by IconEdit
IconMerge — made unnecessary by IconEdit
FEd
Notepad
FreeMap
PerfMon
ClockPtr
AmigaBasic — available separately

AmigaDOS/Shell

Many enhancements have been made for Shell users as well.

All the AmigaDOS commands have been rewritten for compactness and speed. Many commands are now internal so that they are always quickly available. Almost all commands have new options, and all commands that can make use of pattern matching support it.

The Ed text editor has been completely rewritten, and now has menus, mouse/cursor key/function key support, and is fully controllable through AREXX.

Other enhancements include:

- new pattern matching options: NOT operator using ~ and character classes using []
- commands can be embedded in strings using ' (back apostrophe)
- AREXX commands can be entered in Shell
- Shell windows have a Close gadget by default

New Commands

CPU, GET, SET, UNSET, UNSETENV, UNALIAS, MAKELINK

Gone

Certain support files found in previous releases are no longer present, their functions having been moved into the ROM:

C:

FF

L:

fastfilesystem, newcon-handler, disk-validator, ram-handler, shell-seg

DEVS:

ramdrive.device

LIBS:

icon.library
info.library

S:

startupII, CLI-Startup

The Empty directory has also been made unnecessary by the New Drawer menu item in Workbench.

The New FastFileSystem

The Amiga's filesystem has received a great deal of attention for the 2.0 revision, and is now considerably faster and more robust than the FastFileSystem (FFS) introduced with Version 1.3.

Floppy disks can now be formatted and read with the new FFS, while compatibility with OldFileSystem (OFS) disks is retained. Remember, however, that 1.3 Amigas will not be able to read floppies formatted as FFS, so you should use the OFS for disks that will be used to exchange files with 1.3 systems.

Reformatting For Speed

The enhancements to the current FastFileSystem make it desirable for you to reformat your hard disk(s) under 2.0. Increased efficiency in the way the 2.0 FFS stores information on the disk will improve disk performance considerably when this is done.

If you decide to reformat a hard disk under the new FFS, be certain that you perform a complete backup of the drive contents under 2.0 before reformatting.

See the **Installation** section below for further information on reformatting for 2.0.

Disk Size Display

The difference in the way the FFS and OFS allocate disk blocks is reflected in the "Size" result displayed by the AmigaDOS INFO command. INFO now reports the actual data storage capacity of the formatted disk under the current filesystem, rather than the unformatted capacity.

Since FFS has a lower "overhead" of non-data information to store than OFS, the results will be different for the same size disk formatted under OFS and FFS. Thus OFS floppies are shown as having a Size of 837KB, while FFS floppies are shown as 879KB.

Bitmap Block

Due to a new method for writing a disk's bitmap block under 2.0, you will notice some differences when trying to access a disk that has been completely filled. Its bitmap block, normally updated whenever the disk contents change, will not be written to it. Because the bitmap block is not present, the next time the disk is mounted/inserted, a validation procedure must be performed. The length of time this takes depends on the size of the disk.

For floppies, validation takes under a minute. A hard disk partition can take much longer. (Subsequent accesses to the mounted disk will take place at normal speed.)

A requester will appear when you insert a disk that was completely filled under 1.3 into a 2.0 Amiga. The disk can still be read, but cannot be written to under 2.0, even to perform a deletion. You must copy files from the full disk to another disk.

When you attempt to copy all of a full 1.3 disk to a new disk under 2.0, the last file will not be copied. You will need to copy it later. At this point, you can manipulate the new disk, deleting files if you desire. You can also take the disk to a 1.3 system and delete something. When it is no longer full, it can be used normally on a 2.0 system.

2.0 Bootblock and Virus Checkers

Programs that check for computer "viruses" on your disks are likely to produce false alarms under 2.0. Most virus checkers work by comparing the bootblock of the test disk to the standard bootblock. Since the standard bootblock in 2.0 is different from that used in 1.3, pre-2.0 virus checkers will report the discrepancy as a possible bootblock virus infection.

All users should update their virus checking software to the latest, 2.0-compatible versions.

FFS in ROM

The fact that the FastFileSystem is now in ROM, rather than a handler in the L directory, has important implications for those upgrading to 2.0 from a 1.3 system. For the ROM filesystem to operate, references to L:fastfilesystem should not be made.

There are two main areas from which to eliminate these references under 2.0: MountLists and RigidDiskBlocks.

MountLists

Use Ed or another text editor to edit your DEVS:MountList file entries for Amiga filesystem devices (disk or tape drives, or other storage devices).

Eliminate lines referring to **L:fastfilesystem** or **globvec = -1**. Also, check the **DosType** lines for these entries, and be sure they are set to the value **0x444f5301** (this indicates DOS1, the FastFileSystem).

RigidDiskBlocks

Amiga filesystem devices that do not use MountList entries to be mounted by AmigaDOS generally use a RigidDiskBlock (RDB). Such devices include Commodore's A590 and A2091 controller/drive combinations, as well as products by other manufacturers. The RDB stores configuration information for the drive on a special area on the drive, the RigidDiskBlock.

The RDB is edited with a special program tailored for that device. For the A590/A2091, that program is HDToolbox, a part of the 2.0 release. When running only under 2.0, you should delete references to L:fastfilesystem in the RDB. To do this using HDToolbox:

- 1 Run HDToolbox.**
- 2 Select the drive to change, if you have more than one.**
- 3 Click on the "Partition Drive" gadget. The Partitioning window will open.**
- 4 Click on the "Advanced Options" gadget in the Partitioning window. Additional items will appear in the window.**
- 5 Click on the "Add/Update File Systems" gadget. This opens the File System Maintenance window.**
- 6 Make sure the fastfilesystem line in the list window is highlighted. Click on it if it is not.**
- 7 Click on the "Delete File System" gadget.**
- 8 Click on "Ok" in the File System Maintenance window.**
- 9 Click on "Ok" in the Partitioning window.**
- 10 Click on "Save Changes to Drive".**

Failing to make these changes for your devices set up under Version 1.3 will not harm the devices or their data, however those devices may not mount or boot, remaining "invisible" to the system.

1.3 / 2.0 Disks

If you intend to use disks on both 2.0 and 1.3 Amiga systems, the requirements are different.

You will still need to have an L:fastfilesystem file for operation under 1.3. For this purpose, a special version of the 1.3 FFS compatible with 2.0 use is included on the 2.0Install disk. Simply copy this to your L: directory, without making any changes to your existing MountList or RDB's.

This version of FastFileSystem is essentially the same as the 2.0 FFS, but uses no 2.0 features. The requesters will look somewhat different from the 1.3 variety, and the error reporting is less complete.

3. Installation

A successful transition from your 1.3 system to 2.0 depends on proper installation of both hardware and software. Please read and follow all installation instructions carefully.

Installation of Version 2.0 on your Amiga consists of three steps:

- 1 Installation of the 2.0 ROM**
- 2 Installation of the 2.0 software from disk (the UpdateWB script is provided for this purpose)**
- 3 Updating startup files (do this using any text editor)**

The software installation should be performed immediately after the ROM installation.

A 2.0 ROM Amiga booted from 1.3 system disks will look strange and may not be completely stable. Screens will have a "hybrid" 1.3/2.0 appearance because the 1.3 color palette is still being used. More importantly, not all the 1.3 system software on your disks will respond properly with the 2.0 Kickstart ROM installed.

COPY YOUR DISKS!

Before ROM installation, you should make backup copies of each of the disks you received in the Enhancer package. (See your Amiga manual for instructions on copying disks.)

Make sure the originals are write-protected before you begin, and put the copied originals away in a safe place when you are finished copying them. Use only the copies for subsequent installation or work. The original disks should only be used to make further work/backup copies whenever it becomes necessary.

ROM Installation

The Kickstart software that forms the core of the Amiga operating system is supplied on a 512 KB ROM chip packed in a small plastic box in the 2.0 Upgrade package. The 2.0 ROM should be installed by an authorized Amiga dealer or service center.

Take your Amiga to your dealer with the ROM and ROM Installation Instructions.

Once the dealer has installed the ROM, the 2.0 software can be installed.

WARNING! HARDWARE INSTALLATION BY THE USER WILL VOID THE WARRANTY FOR BOTH THE ROM AND THE AMIGA. COMMODORE ASSUMES NO LIABILITY FOR IMPROPER INSTALLATION.

Enhanced Chip Set

As part of continuing Amiga hardware development, the custom chips that provide the Amiga's special graphics capabilities are available in revised form. These chips are not part of 2.0 itself, but many of the new features they provide can be accessed only with the 2.0 software.

What is the ECS?

The ECS consists of two chips: ECS Agnus and ECS Denise. Both are direct, drop-in replacements for the Agnus and Denise chips installed in A500 and A2000 computers. They will not fit directly into the A1000 or the few early, German A2000 machines (those without a monochrome video jack).

The Agnus chip controls access to the Chip RAM which the Amiga uses for graphics and sound data. ECS Agnus allows the Amiga to address 1 Megabyte of Chip RAM. It can produce both NTSC and PAL output.

The ECS Denise chip adds the Productivity and SuperHires display modes, and allows greater flexibility in the use of video genlock units.

Do you need ECS chips?

As stated previously, the Enhanced Chip Set is not necessary to run Version 2.0 software. All 2.0 features, except those graphics-oriented capabilities provided by the ECS chips, will function equally well on ECS and non-ECS Amigas.

You only need to acquire ECS chips if you desire the following features:

- access to 1 megabyte of RAM as Chip RAM (Additional changes to the motherboard may be necessary to recognize a full 1 MB of Chip RAM. Only authorized Commodore service centers should perform such changes.)

- the 640 x 480 or 640 x 960 "Productivity" display modes
- the 1280 x 200 or 1280 x 400 "SuperHires" display modes
- new genlock modes
- ability to switch between NTSC and PAL modes
- improved display with the AMax™ Macintosh® emulator

1.3 ECS Compatibility

These features (with the exception of NTSC/PAL switching and 1 Meg Chip access on A2000s) are not available if the ECS chips are installed in a Version 1.3 Amiga. A 1.3 Amiga with both the ECS chips installed should perform normally.

Do you have ECS chips?

Many A500 and A2000 machines have been shipped with the ECS Agnus chip already installed. You may therefore need to purchase only the ECS Denise to upgrade to the full Enhanced Chip Set.

The easiest way to determine what custom chips your Amiga currently has is to run the ShowConfig utility included on your 2.0Install disk. Place the 2.0Install disk in DF0:, open its disk icon on the Workbench, and then open the ShowConfig icon in the Tools drawer. In the resulting window, information on your current software and hardware will be displayed.

If you have ECS chips, the ShowConfig output will include "ECS Agnus" and/or "ECS Denise".

If you do not have ECS chips, the ShowConfig output will include "normal Agnus" and/or "normal Denise", and indicate whether the Agnus chip is NTSC or PAL.

There are three versions of the Denise chip:

- 1 the original, shipped in the earliest A1000s

- 2 a slight modification of the first to yield the "Extra-HalfBright" mode and used in all Amigas up until the 2.0 ROM release except the A3000
- 3 ECS Denise, at ROM release time used only in A3000s

There are three general families of Agnus chip: the original Agnus (a DIP-style chip used in the A1000 and the few early, German A2000s); "Fat" Agnus (a square chip used in the original A500s and most A2000s); and ECS Agnus (the same size as "Fat" Agnus and used in later A500s and A2000s).

Within the "Fat" and ECS families of Agnus chips, there are variants which have colloquially been known by a variety of names. These informal names have often been inconsistently applied. Fortunately, each chip has an identifying number, as indicated below:

Name	Video	Chip #	Used in
Agnus (512KB Chip)	NTSC	8361	A1000, German A2000
Agnus (512KB Chip)	PAL	8367	A1000, German A2000
Denise		8362	early A1000s
Denise (EHB)		8362	most A1000s, all A500s, A2000s
"Fat" Agnus (512KB Chip)	NTSC	8370	earlier A500s, A2000s
"Fat" Agnus (512KB Chip)	PAL	8371	earlier A500s, A2000s
ECS Agnus (1 Meg Chip)	NTSC/PAL	8372A	later A500s, A2000s
(often known as "Fatter", "Obese", or "Super" Agnus)			
ECS Agnus (2 Meg Chip)	NTSC/PAL	8372B	A3000s
(often known as "Fatter", "Obese", or "Super" Agnus)			
ECS Denise		8373	A3000s

Hardware Compatibility

Some graphics hardware or software produced before ECS chips became generally available may not work correctly with the new chips. Please see the **Troubleshooting** section below.

How do you get ECS chips?

Call your Amiga dealer.

Software Installation

Once the 2.0 ROM has been installed in your Amiga, software installation can be performed.

The 2.0Install disk is provided in your upgrade kit to make the software installation as easy as possible. The UpdateWB program automatically copies the 2.0 files from the 2.0 disks onto a hard disk. Several other tools that you may need to use in the installation process are also provided.

The following tools specific to Amiga 3000 users are included on the 2.0Install disk:

- PrepHD — partitions hard disk to standard A3000 organization
- FormatHD — formats partitions created by PrepHD
- InstallHD — installs Workbench, icons, fonts, and Extras programs
- Update2.x — updates the A3000 Superkickstart image (not needed for ROM machines)

A500 and A2000 owners do not need the A3000 tools and should not attempt to use them on their machines. Instead, if your hard disk needs to be reformatted, you should use the tools that came with your hard disk system. (PrepHD, FormatHD, and InstallHD will work on an A2091 system if you wish your A2000 hard disk set up like an A3000.)

Note: The version of HDToolbox included on the 2.0Install disk should be used by both A2091 and A3000 users.

Floppy Based Systems

If you have a floppy-only system, there is little installation to be done. You can boot from your work copy of the Workbench2.0 disk and use the programs contained on it and the Extras2.0 and Amiga-Fonts2.0 disks as needed.

However, if you wish to use the scalable outline font feature of 2.0, you must copy the proper version of diskfont.library to your boot disk. The version 36 diskfont.library, on the Workbench2.0

disk, does not support the outline font system. The version 37 diskfont.library, stored on the AmigaFonts2.0 disk, does support outline fonts.

Copy diskfont.library version 37 from AmigaFonts2.0:Libs to Workbench2.0:Libs for outline font support. (This overwrites the version 36 diskfont.library originally in Workbench2.0:Libs.) You will need to delete some little-needed utilities or other files from your Workbench2.0 disk first, so that the new diskfont.library will fit.

You then only have to perform whatever modifications to your startup files are required to configure the new work environment to your needs. You may wish to modify the standard Workbench disk, for instance to fit certain fonts or printer drivers on it. See Chapter 7 of the *Using the System Software* manual for recommendations on doing this.

When you first boot your Amiga from floppy under 2.0, you will be asked if you wish to choose a language keymap for your system. A numbered list of keymaps for the supported languages will be displayed. Enter the number of the keymap you want, and press Return. The keymap you choose will become the default keymap.

You will not be asked to choose a keymap on subsequent boots unless you did not respond to the keymap question. You can still change the default keymap at any time using the SetMap program in the Workbench System drawer.

Hard Disk Based Systems

Hard disk users have more to consider. If you have a hard disk, you will want to copy the contents of the Workbench2.0, Extras2.0, and AmigaFonts2.0 disks, and perhaps certain items from the 2.0Install disk, to your hard disk(s). The UpdateWB script provided on the 2.0Install disk will perform the default installation automatically.

The hard disk partition to which you will be installing must be at least two megabytes (2MB) in size. A partition of at least three megabytes (3MB) is needed if you wish to install all the 2.0 fonts on your hard disk as well.

(Note that you do not need two or three megabytes of *free* space on your partition to allow installation. Most of the material being copied to the partition will replace older software.)

Reformatting

To gain the full performance benefits of the 2.0 filesystem, you should reformat your hard disk(s). This should be done some time *after* doing the 2.0 installation, when you have set up your system the way you want it and are sure it is stable.

The result of reformatting under 2.0 can be hard disk operations taking half as much time as under the 1.3 filesystem.

ATTENTION!!!!

If you decide to reformat a hard disk under the new FFS, *be certain that you perform a complete backup of the drive contents under 2.0 before reformatting.* You must use a 2.0-compatible backup program that does a file-by-file copy, rather than a block-copy or "image" backup program.

The HDBackup or BRU programs in the Tools drawer of the Workbench2.0 disk can be used for this purpose.

If you prefer to use another backup program, be sure that it is fully 2.0-compatible before you reformat. Certain versions of at least one popular Amiga backup program were released that had problems under 2.0. Contact the developer of your backup program first for information about 2.0-compatibility updates if you have any doubts.

After reformatting, restore previous contents of the hard disk from the backup. You should notice a considerable increase in the speed of hard disk operations.

UpdateWB

When you are ready to install, place the 2.0Install disk in DF0: and reboot the Amiga. (UpdateWB will not run if you have not booted from 2.0Install:.) When the Workbench screen appears, open the 2.0Install disk icon, then open the UpdateWB icon.

A text window will open, and the script run by UpdateWB will ask you various questions. Answer the questions, pressing Return to enter your answers. You are asked to confirm the location of your SYS: partition, to which the new files will be installed, or to enter the name of the desired partition. You are then asked if you are sure you want to continue with the installation. If you enter "y", messages will appear indicating the progress of the installation.

First, your old Startup-sequence, Shell-startup, MountList, and User-startup (if any), are copied to a directory called OLD that is created on your SYS: partition. Version 1.3 commands that are now internal are also moved from the SYS:C directory into OLD.

You will then be prompted to insert the Workbench2.0, Extras2.0 and AmigaFonts2.0 disks in turn. The 2.0 system files will be copied from them onto the hard disk partition you have specified.

If there is not enough room to copy all the fonts to your SYS: partition, you are asked if you wish the fonts installed on your Work: partition.

New files and directories will be added to your hard disk, and existing system files will be overwritten with their new counterparts. Non-system files and directories (those whose names do not match any on the 2.0 disks) should remain intact. (UpdateWB will deal correctly with the device and handler files of A2232 multi-serial board owners.)

You are also asked if you wish to set a default language keymap. A numbered list of keymaps for the supported languages will be displayed. Enter the number of the keymap you want, and press Return. The keymap you choose will become the default keymap. You can still change the default keymap at any time using the SetMap program in the Workbench System drawer.

When the message "Software installation complete" is printed, you can reboot into a full Version 2.0 environment.

Startup-sequence and User-startup

UpdateWB creates a directory called OLD on your SYS: partition. Your current 1.3 MountList, Startup-sequence, and Shell-startup are copied to it. You will want to refer to them to restore your preferred working environment when you have completed installation. If you have anything non-standard in your 1.3 StartupII or Startup-sequence.HD, or you have any other startup scripts, you may wish to copy them to OLD after installation, for later reference.

To help ensure consistent and reliable booting under 2.0, users are strongly encouraged *not* to modify the default S:Startup-sequence script.

Instead, it is recommended that you create an S:User-startup file, and place in it all the non-standard ASSIGN and MOUNT statements, commands, path additions, and other configuration information you had in your 1.3 startup files. (See the *Using the System Software* manual for information on editing script files.)

The standard 2.0 Startup-sequence executes S:User-startup once the more critical boot operations have been done. In almost all cases, items placed in your 2.0 User-startup will have the same effect as they did in your 1.3 Startup-sequence or StartupII.

You can use the Workbench WBStartup drawer instead of or in addition to User-startup to run programs automatically when you boot.

Application Tips

Once you have installed 2.0 and replaced the necessary ASSIGNS, etc. in your startup files, your applications should work under 2.0 essentially the same as they did under 1.3, aside from possible cosmetic differences.

However, some applications or expansion components may still not work properly at first. In this case, reinstalling the application or the component's device driver should cure the problem.

This may involve re-running an installation program provided on the application disk, or copying a file from the application disk to the DEVS:, LIBS:, L:, or Expansion directories.

For example, the Commodore A2090 hard drive controller, and any other devices that start via device drivers in the Expansion drawer, must have the driver icon in the Expansion drawer of the boot device.

Two more Commodore-specific examples:

A2232 Multi-serial Board

The Commodore A2232 multiple serial-port board requires a special version of the serial.device driver. This version of serial.device, included with the A2232, replaces the normal serial device driver.

The UpdateWB installation correctly reinstalls the A2232 driver. The A2232 serial.device need not be reinstalled over the 2.0 device.

Bridgeboards

If you have a Commodore Bridgeboard™ PC-emulator board installed in an Amiga with a 68000 microprocessor (an unaccelerated A2000 or equivalent), you should not have to reinstall your Janus software after installing 2.0.

In fact, you should *avoid* reinstalling the Bridgeboard software unless you have the Janus 2.1 release (not available at Amiga 2.0 operating system ROM release time). Provided you do not attempt to reinstall the original (pre-Janus 2.1) Bridgeboard software, your Bridgeboard should work normally in a 68000-based Version 2.0 Amiga. We recommend upgrading to Janus 2.1 as soon as it becomes available.

If your Bridgeboard is in an accelerated Amiga (68020/68030/68040 microprocessor) you must do one of two things before accessing the Bridgeboard under 2.0:

- run the command CPU NODATACACHE
- run the command ENFORCER QUIET (allows higher system performance than the CPU NODATACACHE method)

Either command can be used, but it must be placed in the Startup-sequence *before* the BINDDRIVERS line.

The Enforcer program is included on the 2.0Install disk in the Tools drawer, and with the Janus 2.1 Bridgeboard software release. Copy Enforcer to your C: directory.

4. Troubleshooting

One of the main goals in the development of Version 2.0 was to maintain the highest degree of compatibility with software developed for earlier versions of the Amiga operating system.

Properly-written applications — as well as a remarkable number of improperly-written ones — should run smoothly under 2.0.

At the end of this manual is a list of Amiga applications whose makers have tested their products under Version 2.0. The packaging for each of these Amiga applications should display the green "Release 2 Compatible" sticker:



Some programs written before 2.0 became available will show minor cosmetic problems:

- Some applications that open their own screens have window borders of a different color than in 1.3
- Programs that depended on the 1.3 Workbench color scheme will look strange (Note: You can use the 2.0 Colors program in the Tools drawer to adjust a program's palette.)
- The program's custom gadgets may overlap their borders

Such discrepancies in appearance should not affect program operation.

Problems

It is inevitable that any operating system revision as massive as Version 2.0 will result in more serious problems with a few applications.

In almost all cases, failure of a program to perform properly is the result of non-standard programming practices that depended on erroneous assumptions.

For instance, programs that use disk-based copy protection schemes sometimes fail under 2.0, since they rely on unsupported quirks of the 1.3 operating system to inhibit normal copying methods. Game software in general is prone to have problems under newer revisions of an operating system, because of the variety of unusual programming techniques used to maximize performance.

If you have difficulty, there are a number of things you can and should try before you contact the developer of the program. Often a seemingly serious problem will disappear when the proper steps are taken.

What to do

Establish the source of the problem

Not every problem you experience after installing 2.0 will be a 2.0 compatibility conflict. Before taking any of the steps mentioned below to fix typical upgrade problems, try to eliminate other possible causes.

● User error

Perhaps you just did something wrong while using the program. If it "always used to work," are you sure you used to do *exactly* the same thing?

Check the program documentation carefully and try again.

● Documentation

Then again, maybe you are doing just what the documentation says, but the documentation is wrong. Make sure you have not overlooked an update or addendum to the manual, or a "Readme" file on the program disk that corrects the current documentation.

You may need to contact the developer for clarification if you cannot determine what was intended.

- **Programmer error**

No program is 100% bug-free. Under 2.0 you may have stumbled upon an existing bug in the application that you never came across under 1.3. Be particularly wary of older, public-domain utilities.

Try exactly the same operation on a 1.3 system. If it occurs there as well, the problem is almost certainly in the program itself.

Program bugs should be reported in detail to the developer (see the **Bug Reporting** section below).

- **Program interaction**

The problem may be a conflict with another program or programs you have running. Quit any other applications, including background utilities such as screen/mouse blankers, and "hot-key" programs.

These programs may not multitask well, and could be interfering with your application in some way. Or they may be taking up too much memory from your application. (Version 2.0 itself does require 20 to 40 KB more system RAM than 1.3 while running.)

- **Hardware**

New hardware item(s) installed at the same time you upgraded to 2.0 may be the source of the problem. Even expansion items that you have had running successfully under 1.3 may be at fault.

Try testing the problem application on other systems, under both 1.3 and 2.0 if possible. If the problem happens on a 1.3 system also, then it is not a 2.0 compatibility problem. (Note that some hardware may require a newer revision of its own ROM or software device driver to work properly under 2.0.)

Try removing all additional hardware items one by one, testing after each to see if the problem disappears. You may also need to test for the possibility that some internal component of the stock Amiga is malfunctioning.

If the problem disappears under a different hardware configuration, chances are that the problem is in your hardware, and not a 2.0 conflict. You will need to repair or update your equipment.

Maybe You Have a 2.0 Problem

If you have checked all the above possibilities and none applies to your difficulty, perhaps the problem is indeed related to 2.0. There may still be a relatively simple solution.

Check for the following:

- **Bad 2.0 installation**

Some small but important step(s) in the 2.0 installation process may have been omitted or improperly performed. Reread all the instructions on installation and review what you did.

If a certain file was not copied to your hard disk, for example, it would typically be revealed by requesters saying that a given object (file, directory, volume) could not be found. A situation like this is likely to cause such problems with other applications.

If you had previously altered the attributes of 1.3 system files, the installation may not have worked properly.

If a file is missing, the solution is to copy it from the 2.0 disk to the appropriate directory. If you cannot narrow down the problem to a particular missing file, a complete reinstallation of 2.0 may work.

- **Bad application reinstallation**

If you reformatted your hard disk under 2.0, and then restored the application from a backup:

Possibly the application program file was damaged in the backup/restore process. Try copying the application from its original floppy disk to the same directory on your hard disk.

If you did a complete reinstallation of the application under 2.0, using the application's installation script, consider the following potential problems with scripts.

Some pre-2.0 scripts fail when run under the new operating system. If you have some familiarity with editing scripts, you may be able to modify the script so that it will work. Load the script into Ed or another text editor and check for the following:

- **attempts to access commands no longer in the C: directory**

Many of the AmigaDOS commands that scripts use (ECHO, IF, CD, RUN, etc.), which were formerly stored in the C: directory in 1.3, are now internal and do not exist in C:. Scripts will often try to copy a command to the Ram Disk before using the command. Look for lines such as this:

```
copy sys:c/echo ram:echo
ram:echo "Install now?"
```

In cases such as this, the script itself may fail at the COPY line. Simply remove the COPY line, and change lines referring to the command in RAM: to call the command directly. After removing the COPY, changing the second line above to

```
echo "Install now?"
```

would work as intended under 2.0.

See the *Using the System Software* manual or the Command Reference foldout to see which commands are now internal.

- **creation of incorrect MountList entry**

As mentioned in an earlier section on the new FastFileSystem, certain references needed in 1.3 MountList entries will cause problems under 2.0.

If your application's installation involves creation of additional entries for DEVS:MountList, check the entries for references to **L:fastfilesystem** and **globvec**. These references should be eliminated for 2.0.

- **modification of S:Startup-sequence**

The install script may modify the Startup-sequence file, adding ASSIGN or EXECUTE statements it needs. These modifications may be disrupting the 2.0 Startup-sequence.

Examine your Startup-sequence, and delete any non-standard lines added by the install script. Edit the install script, changing all S:Startup-sequence references to S>User-startup. Then re-execute the script.

- **references to objects no longer in 2.0**

Attempts to reference files or directories that no longer exist in 2.0, or which have been moved to ROM, will cause problems. An attempt to open LIBS:icon.library, for example, will fail, since icon.library cannot be found in LIBS: under 2.0.

See the section above on files or directories that are no longer in 2.0, and change or eliminate any references to them.

- **non-standard Preferences settings**

Some applications react badly when started on a system that uses some of the new Preferences options. Try the following:

- use Prefs/ScreenMode to reset your display to 4-color Hires or Hires-Interlaced (may fix program screens of wrong size/color)
- use Prefs/Overscan to reset your screen size to the default values (may fix missing sprites, badly positioned screens, or read/write errors when using A2090 or A2090A hard disk controllers)
- use Prefs/Font to reset your System Default Text and Screen Text fonts to Topaz 8 (may fix overlapping text problems)

Please check the **Troubleshooting Reference** section below for information on dealing with other problems that may occur.

Some Problems Require Updates

If you have tried all the above techniques and still cannot discover a way to fix the problem you are having, your next course of action should be to contact the developer of the application.

Most major software developers have a technical support telephone line, and/or are accessible via modem either directly or on one or more online information services. The developer may be aware of the problem you are experiencing, and have a ready solution. The solution may be a procedure similar to those described above, or a software update available on disk or online.

On the other hand, it is possible that the developer will be unable to help. The developer may not yet be fully familiar with all aspects of the new operating system. Your difficulty may be solved only by a future update of the application software.

There is the possibility that you have uncovered a bug in 2.0 itself. If you suspect this and have exhausted all other possibilities, you should report the problem to Commodore.

Bug Reporting

Any time that you have to report a problem you are having, it is crucial that you give enough information to allow someone else to reproduce the problem.

The value of any bug report depends on *completeness* and *accuracy*. You must be sure you include all the following information:

- 1) Hardware being used
 - Amiga model
 - amount and type of RAM (Chip and Fast)
 - Custom chips: ECS/non-ECS, NTSC/PAL
 - drives: floppy and hard (include controller and drive model number, size and partitioning of hard disk)
 - any other internal or external equipment (include all model numbers, ROM revisions, capacities, configuration, etc.)

2) Software being used

- Amiga Kickstart and Workbench version numbers
- version numbers for all AmigaDOS commands, 2.0 libraries, etc. being used by the applications
- version number of the application
- names and version numbers of any other software in use at the same time

3) Problem reproduction method

- detailed description of problem symptoms
- exact steps needed to reproduce the problem

Basic information on your Amiga can be obtained by running the ShowConfig program in the Tools drawer of the 2.0Install disk. It lists microprocessor type and settings, RAM, custom chip types, and Kickstart/Workbench versions.

You can also see the Kickstart and Workbench version numbers by using the 2.0 Workbench menu's "About . . ." item. The AmigaDOS VERSION command can be used to display the version number of any 2.0 system file, and many 1.3 system files. (See the *Using the System Software* manual for documentation of the VERSION command.) These version numbers are the definitive way to identify the software you are running.

These version numbers actually have two parts: the version (to the left of the decimal point) and the revision (to the right of the decimal point). For current 2.0 files, almost all version numbers will be 37, for example, "Kickstart version 37.175". (Note: since the revision portion of the number, to the right of the point, is independent, the number 37.112 indicates software later than does 37.95.) The 1.3 releases all have a version number of 34.

Always use version/revision numbers (37.xxx), not release/update numbers (2.xx).

Submitting the Report

Bug reports should be submitted in writing. Most developers are eager to resolve any 2.0 compatibility problems their customers have with their products, and respond very positively to a clear, thorough report.

If you must make a report to Commodore, address it to Amiga Software Engineering, Commodore Business Machines, 1200 Wilson Dr., West Chester, PA 19380. Although we read all bug reports and attend to them carefully, we can rarely provide personal replies.

You may also submit bug reports to Commodore in the "amiga.dev/bugs" conference of BIX (Byte Information Exchange), a commercial online service. BIX is the official international online support forum for the Amiga. BIX service is available in the US through Tymnet and other national timesharing networks.

Troubleshooting Reference

Hard Disk Problems

Partition will not mount

Solution

Remove references to
L:fastfilesystem from
DEVS:MountList and
RigidDiskBlock

Remove references to globvec
from DEVS:MountList

Make sure DosType is
0x444f5301

Make sure device driver(s) and
icon(s) are in proper drawer(s)
of SYS: device

Unimproved performance

Back up, reformat, and restore
under 2.0

Poor performance between
two or more SCSI devices

Run ReselectOn utility in
2.0Install:Tools

Spurious read/write errors
when using A2090 or
A2090A controller

Reset overscan to default (no
overscan) in Prefs/Overscan
editor

Drive lockup when using
Syquest™ removable-media
drive and other SCSI devices
simultaneously

Reset number of colors to 4 in
Prefs/ScreenMode editor

Turn off SCSI "Reselection"
option with HDToolbox
(requires rebuilding cartridge
partition(s))

OR

Call Syquest for update
information

Floppy Problems

Floppy must be validated when
inserted

Delete something from disk so
that it is no longer full

Floppy cannot be altered under
2.0

Copy needed files to a 2.0-
formatted floppy

Use 1.3 Amiga to delete
something from disk so that it is
no longer full

Virus checker reports infection
of all 2.0-formatted disks

Update virus checker to 2.0-
compatible version

Floppies formatted on 2.0
Amiga not readable by 1.3
Amiga

Use OFS-formatted floppies to
transfer files between 1.3 and
2.0 Amigas

Disk INSTALLED under 1.3 does
not open initial window
immediately when booted

Not a problem; wait for booting
to complete

Startup Problems

Bootling does not complete
normally

Use unmodified default 2.0
Startup-sequence

Be sure hard disk mount and
boot requirements are met (see
Hard Disk Problems, above)

Applications are not launched at boot time	Place application icons in WBStartup drawer Invoke application in User-startup Reinstall application
Familiar Shell aliases not recognized	Copy desired aliases from your 1.3 Shell-startup (stored in OLD directory on your 2.0 System: partition) to current S:Shell-startup Check documentation of 2.0 ALIAS command format
"Insert Volume" requesters appear	Add required ASSIGN statements to User-startup
Commands/programs not found on search path	Add directory(s) to PATH statement in User-Startup
Application will not run	Reset Preferences settings to defaults (see Display Problems, below) Reinstall application Contact application developer for instructions Acquire 2.0-compatible version of application
Expansion device not recognized	Place device driver icon in SYS:Expansion drawer
Bridgeboard will not operate on 68020/68030/68040 Amiga	Insert command CPU NODATACACHE in Startup-sequence before BINDDRIVERS line

OR

Copy Enforcer program from 2.0Install:Tools to C: directory, insert command ENFORCER QUIET in Startup-sequence before BINDDRIVERS line

Script Problems

Script fails on attempt to copy C: command	Edit script: delete lines that attempt to copy commands that are internal under 2.0, and remove path specification of the copied command
Script alters S:Startup-sequence	Edit script: change lines to refer to S>User-startup instead of S:Startup-sequence
Script creates improper DEVS: MountList entry	Edit MountList entry: remove references to L:fastfilesystem, globvec; make sure DosType is 0x444f5301 (DOS1)
Script refers to non-2.0 objects	Edit script: delete references to those objects
Script fails with "No K directive" message	Edit script: add lines .bra { .ket } to beginning of script.

Display Problems

Text displayed incorrectly	Reset default fonts to Topaz 8 in Prefs/Font editor
Application screen is wrong size or color	Reset screen resolution to 4-color Hires or Hires-Interlaced in Prefs/ScreenMode editor
Application screen is positioned incorrectly on monitor	Reset overscan to default (no overscan) in Prefs/Overscan editor
Application sprites do not appear	Reset overscan to default (no overscan) in Prefs/Overscan editor
	OR
	Shift screen to right in Prefs/Overscan editor

Video genlock device does not operate correctly

Desired graphics mode is not available in ScreenMode Preferences editor

Run the Lacer program in 2.0Install:Tools to force the Amiga into Interlace mode

Drag icons for desired modes from MonitorStore drawer to Monitors drawer and reboot

Make sure Mode_Names icon is in WBStartup drawer

Input Problems

Cannot enter Control characters in text gadget

Press Right Amiga key when entering Control characters

Disable **Text gadget filter** flag in Prefs/IControl editor

Cannot see menus when in certain areas of super-sized Workbench window

Enable **Screen menu snap** flag in Prefs/IControl editor

Screen is dragged when using an application's Left Mouse Button/qualifier key combination

Change **Mouse Screen Drag** qualifier key in Prefs/IControl editor

Certain Left Amiga Key combinations do not work as expected within an application

Change **Command Keys** alpha key for screen depth, requester shortcuts in Prefs/IControl editor

Compatibility Listing

Below is a list of software that has been reported by its publishers to be compatible with Version 2.0 of the Amiga operating system. The packaging of this software should display the green "Release 2 Compatible" sticker.

For titles with a version number, that version and any later version should be 2.0 compatible. If no version number is given, the latest version available should be 2.0 compatible. Please contact the publisher for information on current software versions.

ASDG	CONSULTRON
ScanLab 100	CrossDOS V4.0
The Art Department	CREATIVE FOCUS
ACTIVE CIRCUITS	DJ Helper
ImageLink	DATAMAX RESEARCH
CineLink	Tax-Break
ADVANCED CREATIONS	DELTA GRAPHICS
The Engineer's Tool Box	Hamitup!
APPLIED ENGINEERING	DIEMER DEVELOPMENT
AE 3.5 Disk Drive	C-ZAR
DataLink Express	DIGITAL CREATIONS
DataLink 2000	DCTV
RamWorks 2000	DISC CO.
RamWorks 500	FusionPaint 1.08
AVATAR CONSULTING	Infofile 1.2
Heart of the Dragon	DR. T'S
BLACK BELT SYSTEMS	Tiger Cub
Softpane LED Display	KCS
RLOI-1	Copyist Level II
HAM-E	ELAN DESIGN
Board Master	Elan Performer 2.0
BLUE RIBBON SOUNDWORKS	ELECTRONIC ARTS
Bars & Pipes	Deluxe Paint III V3.25
BRØDERBUND	EXPERT SERVICES
Carmen Time	Secretary
Carmen World	Ramify
Carmen USA	EXPRESS-WAY SOFTWARE
Carmen Europe	Express Copy V1.5
BROWN-WAGH PUBLISHING	FOCAL POINT SOFTWARE
BGraphics	Retail Management System
Easy Ledgers	FREE SPIRIT SOFTWARE
Service Industry Accounting	Doctor Ami
CENTAUR SOFTWARE	Ami Alignment System
Mindlink	GFX BASE
B.A.D. V4	X Window System for Amiga
CENTRAL COAST SOFTWARE	GOLD DISK
Quarterback V4.3	ShowMaker
CONCISE LOGIC	Professional Page 2.0
The Scannery	Professional Draw 2.0

Advantage 1.1
 Hyperbook
 Transwrite 2.0
 GO SOFTWARE
 AmigaMOP Test Manager V4
 GLASSCANVAS PRODUCTIONS
 Art Libraries
 Enhanced Xerox 4020 Printer Driver
 Enhanced Sharp JX-730 Printer Driver
 GRAMMA SOFTWARE
 CalCalendar Maker
 Fred Speed Dialer
 NAG Plus
 HC SOFTWARE AUSTRALIA
 Record Manager: Information Base
 HYPERCUBE ENGINEERING
 Fractal Flight
 INNOVATRONICS
 CanDo
 INNOVISION
 Broadcast Titler 2
 INTEGRAL SOFTWARE
 EZ-Grade
 INTERACTIVE VIDEO SYSTEMS
 IVS Trumpcard Disk Utilities
 JMH SOFTWARE OF MINNESOTA
 The Talking Coloring Book
 The Talking Animator
 KFS SOFTWARE
 The Accountant
 LAKE FOREST LOGIC
 Macro Paint
 Adapt
 Disk Mechanic 3.0
 MEGGIDA ENTERPRISES
 Recipe-Fax 2.0
 MICROSEARCH
 City Desk 2.01
 MICRO-SYSTEMS SOFTWARE
 Excellence V2.0
 On-Line Platinum
 Scribble!
 Works Platinum
 MIGRAPH
 Hand Scanner & Touch-Up
 MOONLIGHTER SOFTWARE DEVELOPMENT
 Ami-back
 NATURAL GRAPHICS
 Scene Generator
 NEWTEK
 Digipaint 3
 NEW HORIZONS
 ProWrite V3.0
 THE OTHER GUYS
 Synthia Pro 2.40
 Synthia II 2.40
 OXXI
 Aegis Animagic
 Aegis Videotitler
 Aegis Audiomaster III
 Aegis Sound Master
 Aegis Spectracolor
 A-Talk III
 TurboText
 PALOMAX
 MAX - 125 Hard Disk Adapter
 PASSPORT DESIGN
 Master Tracks PRO
 TRAX
 PROGRESSIVE PERIPHERALS & SOFTWARE
 Video Blender
 Video Master 32
 QIC Tape
 DoubleTalk
 MiniGEN
 Progen
 FrameGrabber
 FrameGrabber 256
 Baud Bandit 2400 External Modem
 Baud Bandit MNP Level 5 2400 External Modem
 Baud Bandit 9600 External Modem
 Baud Bandit 9600 Internal Modem
 3-D Professional
 UltraDesign
 IntroCAD Plus
 IntroCAD
 Animation Station
 Baud Bandit
 FrameGrabber V2.0
 PIXmate
 Diskmaster
 Microlawyer
 Math-Amation
 THE PUZZLE FACTORY
 Resource
 RADICAL EYE
 AmigaTEX
 RIGHT ANSWERS GROUP
 The Director
 SAS INSTITUTE
 SAS/C
 SATTLEBACK GRAPHICS
 My Paint
 SAXON INDUSTRIES
 Saxon Publisher V1.00
 SEVEN SEAS SOFTWARE
 MathVision
 SHEREFF SYSTEMS
 Pro Video Post
 Pro Video Gold
 SLIDE CITY
 TV Graphics

SOFT LOGIK PUBLISHING
PageStream
SOFTWARE TECHNOLOGY
The Disk Labeler
SOFTWOOD
Pen Pal
SYNDESIS
TSSnet
Interfont
InterChange
STYLUS/TALIESIN
ProVector

VEGA TECHNOLOGY
Amikit 2.0
VIRTUAL REALITY LABORATORIES
Distant Suns
Vista
Vista II
ZARDOZ SOFTWARE
ImageFinder
THE ZUMA GROUP
TV*SHOW Version 2
TV*TEXT Professional

(This is by no means an exhaustive list of 2.0 compatible software. Check with publishers for the latest product information.)

Commodore makes no warranties regarding the compatibility of the software mentioned above.

All trademarks are the property of their respective owners.

Notes on Specific Products

The developers of the following applications have indicated their desire to have the following noted about their products:

Deluxe Paint III, Electronic Arts

Users of Deluxe Paint III may have a problem when attempting to use the flood-fill tool with complex areas under 2.0.

Version 3.25 of Deluxe Paint III corrects this problem. An update to version 3.25 is available free to owners of earlier Deluxe Paint III versions within the 90-day warranty period with proof of purchase date; the update is \$7.50 after the warranty period has expired or if there is no proof of purchase date. Customers must return all three DPaint III disks with a dated receipt or \$7.50, and a note requesting the Workbench 2.0 compatible version to:

Electronic Arts Customer Warranty
P.O. Box 7578
San Mateo, CA 94403-7578

For further information on obtaining the update, call the Electronic Arts Customer Support/Warranty department at (415) 572-2787.

Quarterback, Central Coast Software

Users of Quarterback version 4.2 and earlier may have problems after performing a hard disk backup under 2.0.

Version 4.3 of Quarterback corrects this problem. An update to version 4.3 is available free to owners of Quarterback versions 4.0 through 4.2. There is a small fee for upgrading from a version earlier than 4.0. Contact Central Coast Software for further information.

To obtain the free update to Quarterback 4.3, customers must return the original Quarterback disk to:

Central Coast Software
Attn: Quarterback Upgrade
P.O. Box 164287
Austin, TX 78716

SA Series SCSI Host Adaptors, Comspec

To use the SA500, SA1000, or SA2000 with 2.0, an upgrade is required. For more information, contact:

Comspec, Technical Support Dept.
74 Wingold Ave.
Toronto, Ontario
M6B 1P5 CANADA
(416) 785-3553



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